Figures

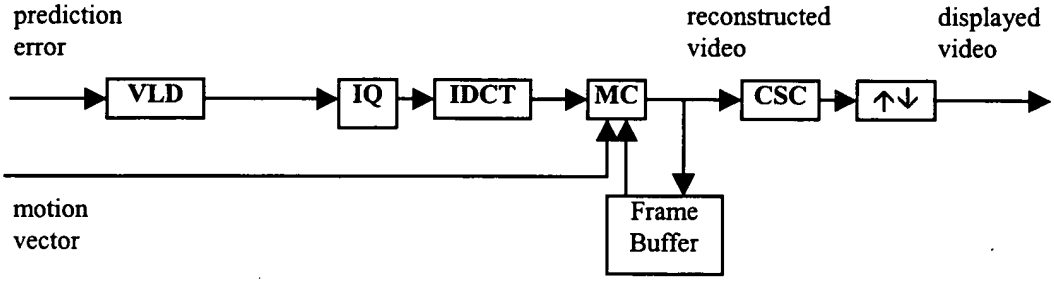


Figure 1

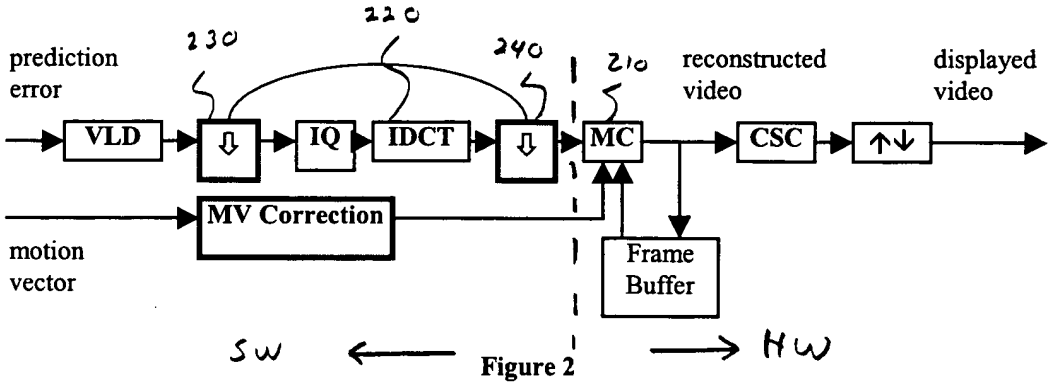
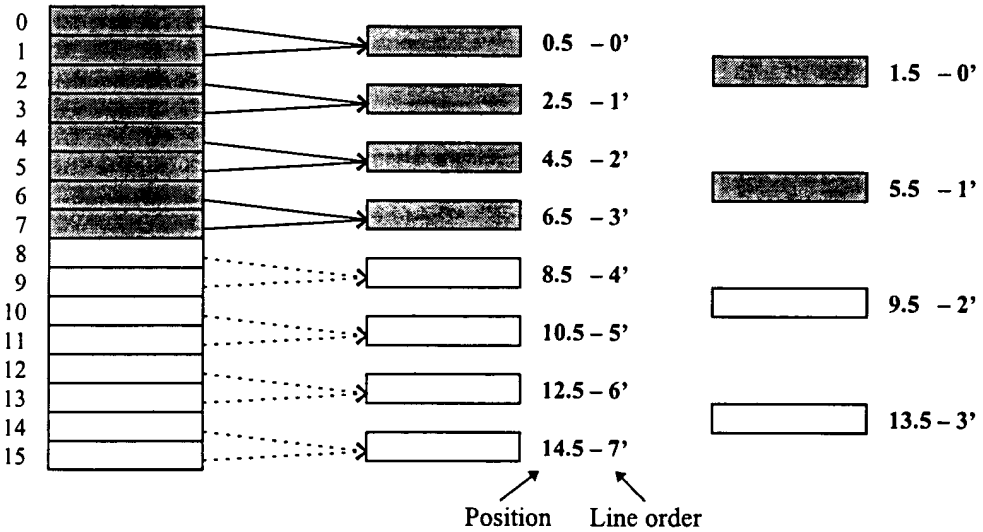


Figure 2

Frame picture type with frame prediction



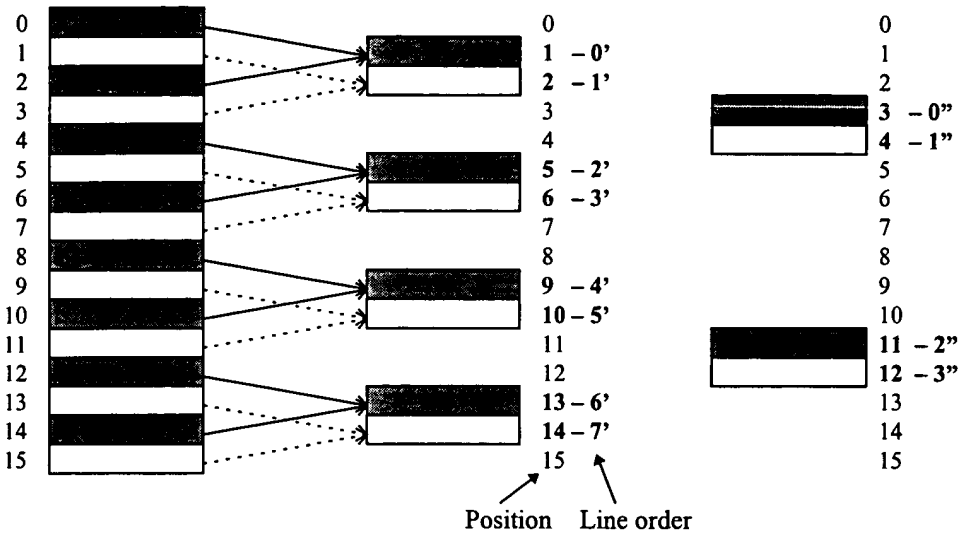
(a) Left half of the original Luma macroblock

(b) 2:1 downsample with frame DCT data

(b) 4:1 downsample with frame DCT data

Figure 3

Field picture type with field prediction



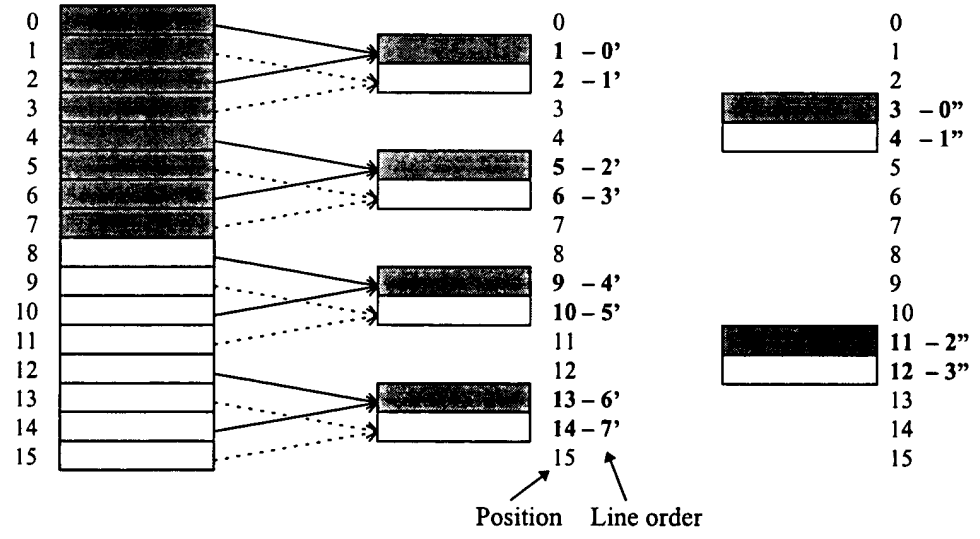
(a) Left half of the original Luma macroblock

(b) 2:1 downsample with field DCT data

(b) 4:1 downsample with field DCT data

Figure 4

Frame picture type with field prediction
(1) for macroblock with frame DCT and frame prediction



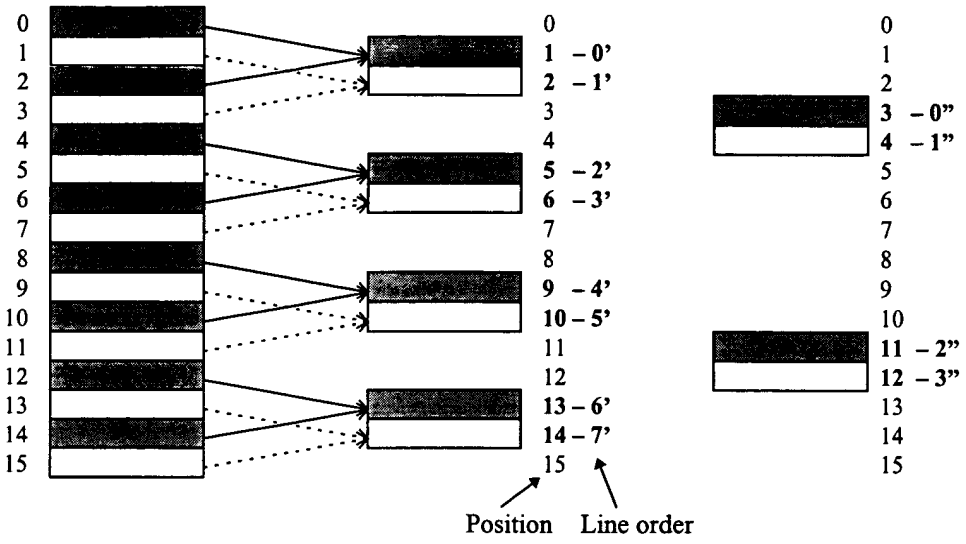
(a) Left half of the original Luma macroblock output from frame iDCT

(b) 2:1 field-like downsample after frame iDCT

(b) 4:1field-like downsample after frame iDCT

Figure 5

Frame picture type with field prediction
(2) macroblock with field DCT and field prediction



(a) Left half of the original Luma macroblock

(b) 2:1 downsample with field DCT data

(b) 4:1 downsample with field DCT data

Figure 6

Express Mail Label No. EL 465 202 462 US

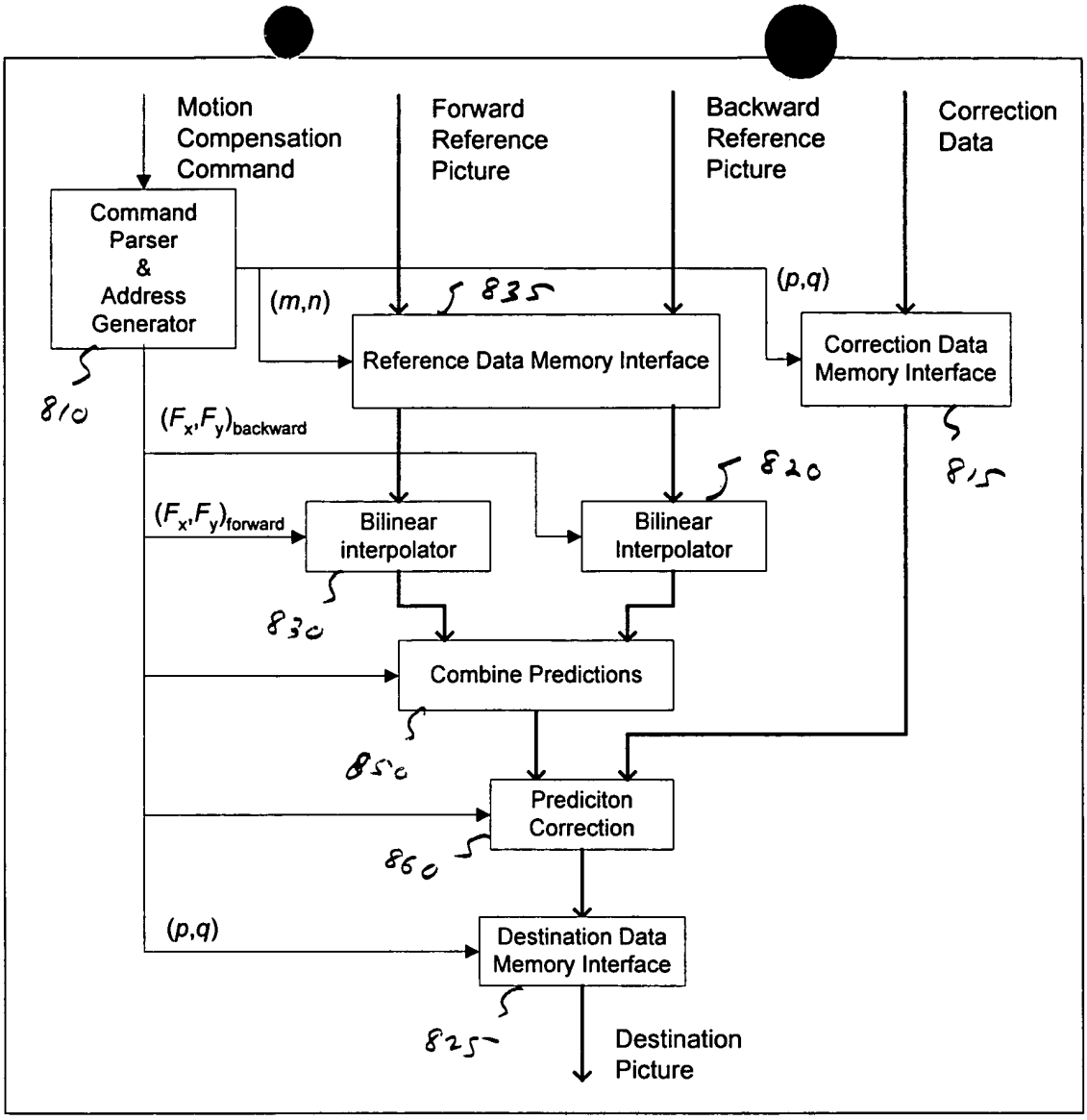


Figure 7

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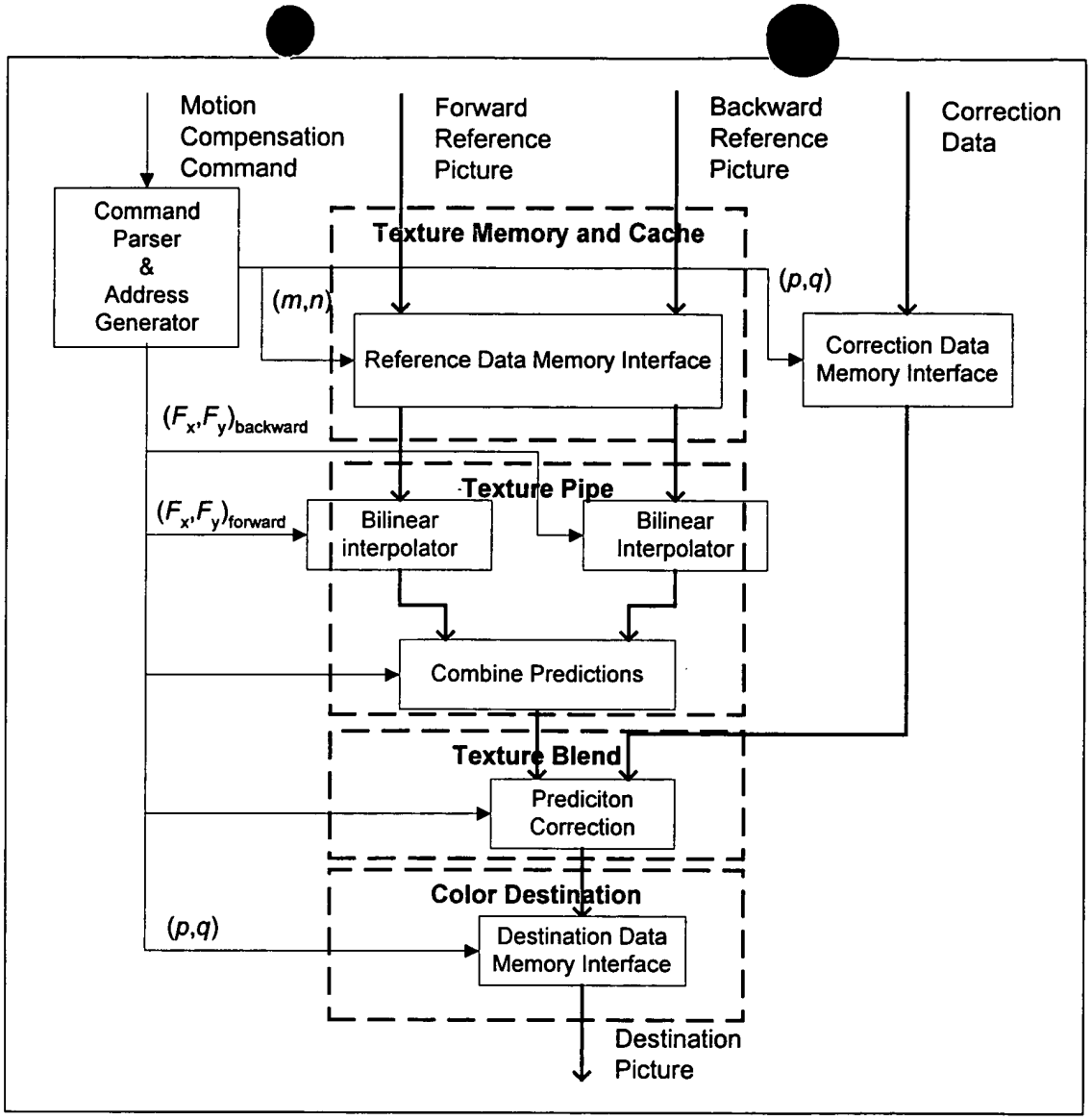

Figure 8.

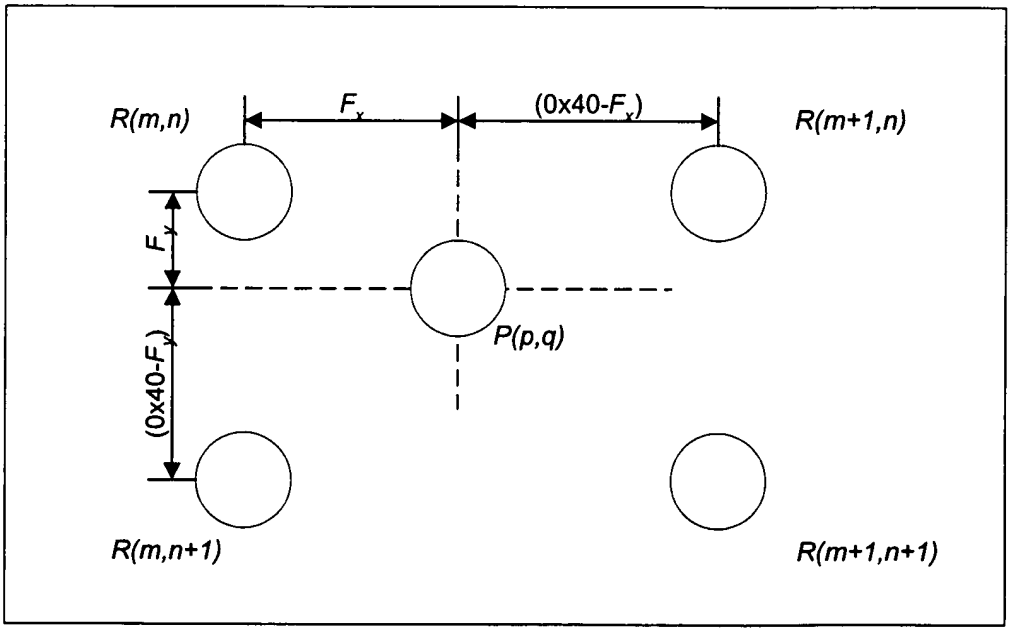

Figure 9.

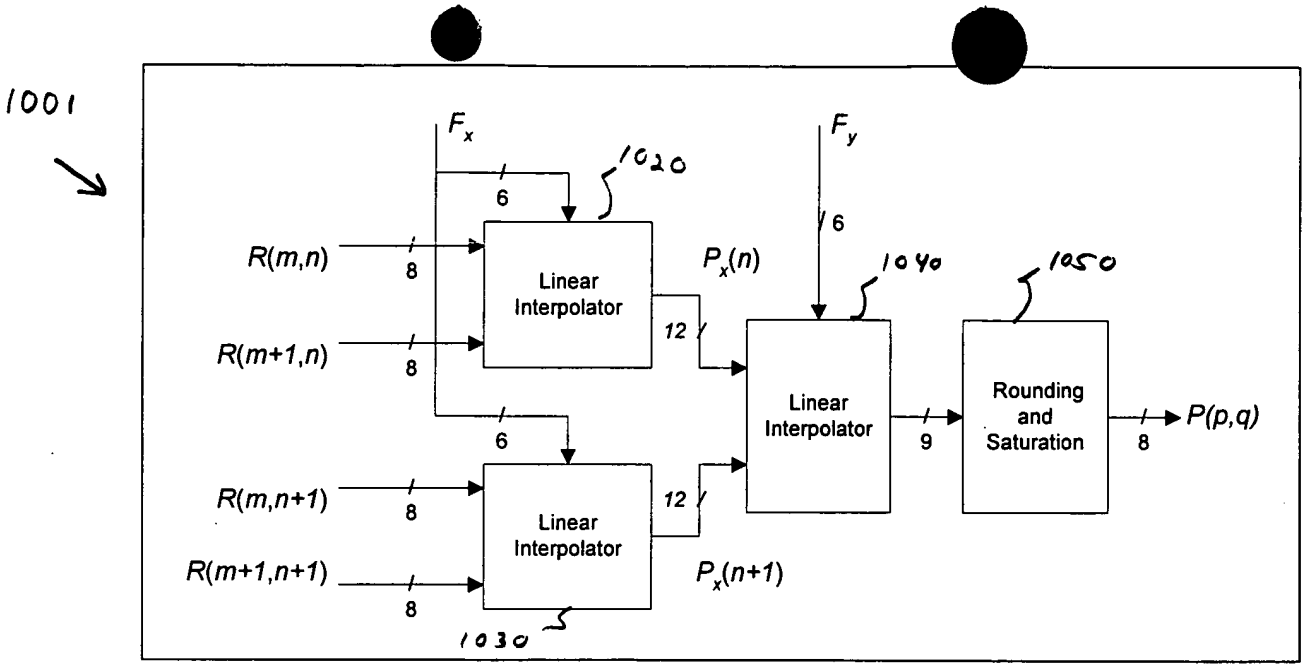

Figure 10.

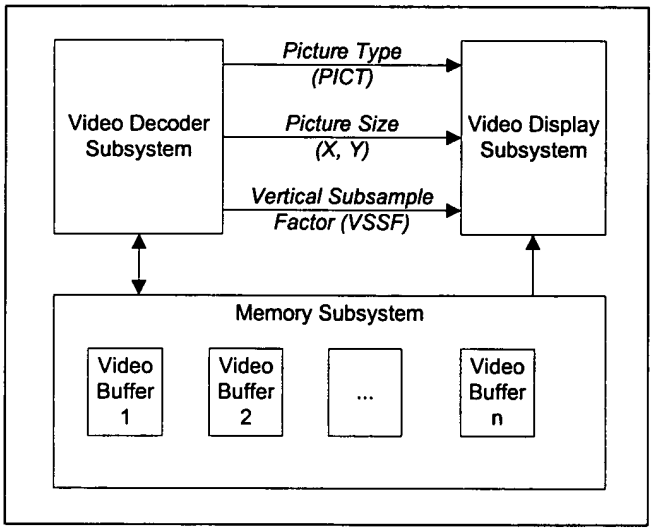

Figure 11.

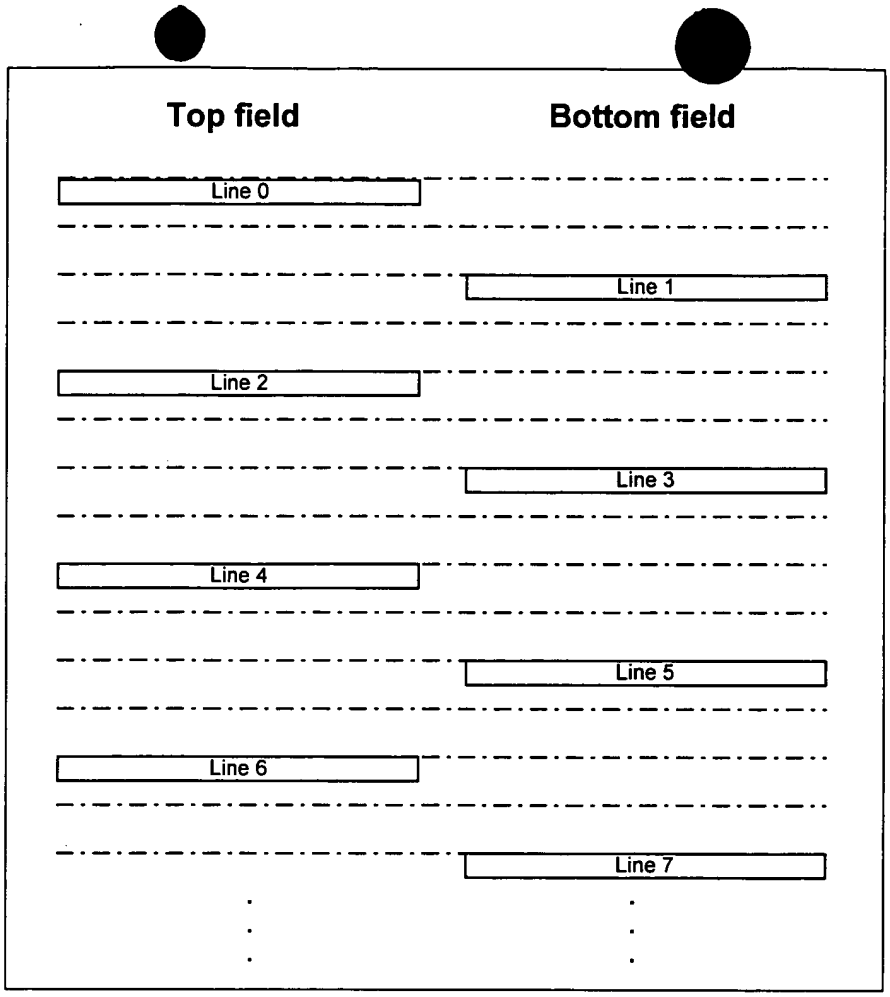
Top field
Bottom field
Line 0
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Line 7

Figure 12.

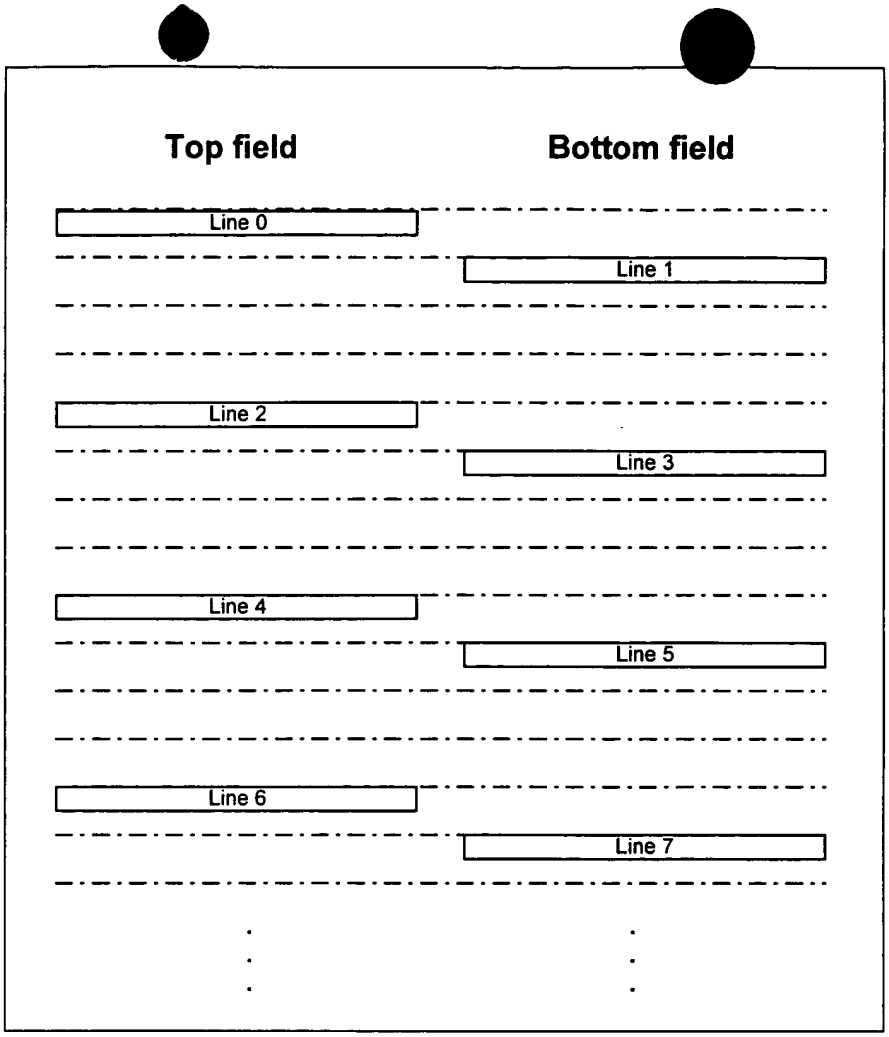
Top field
Bottom field
Line 0
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Line 7

Figure 13.

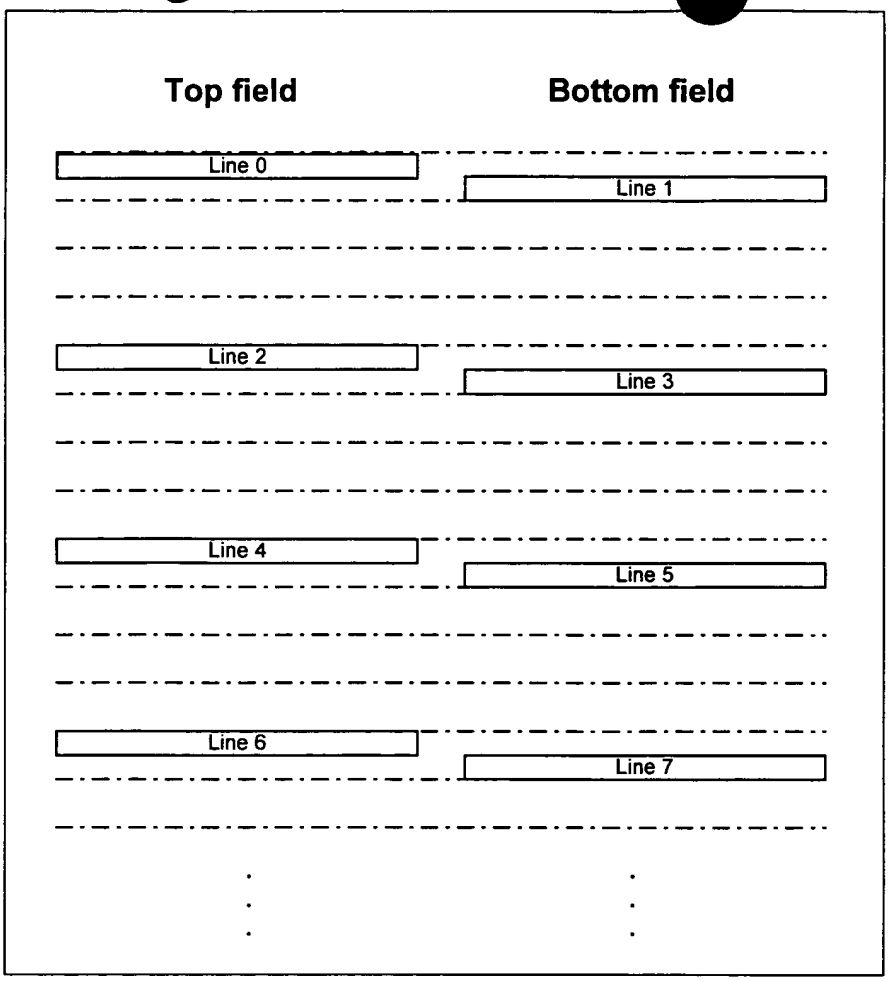
Top field
Bottom field
Line 0
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Line 7

Figure 14.

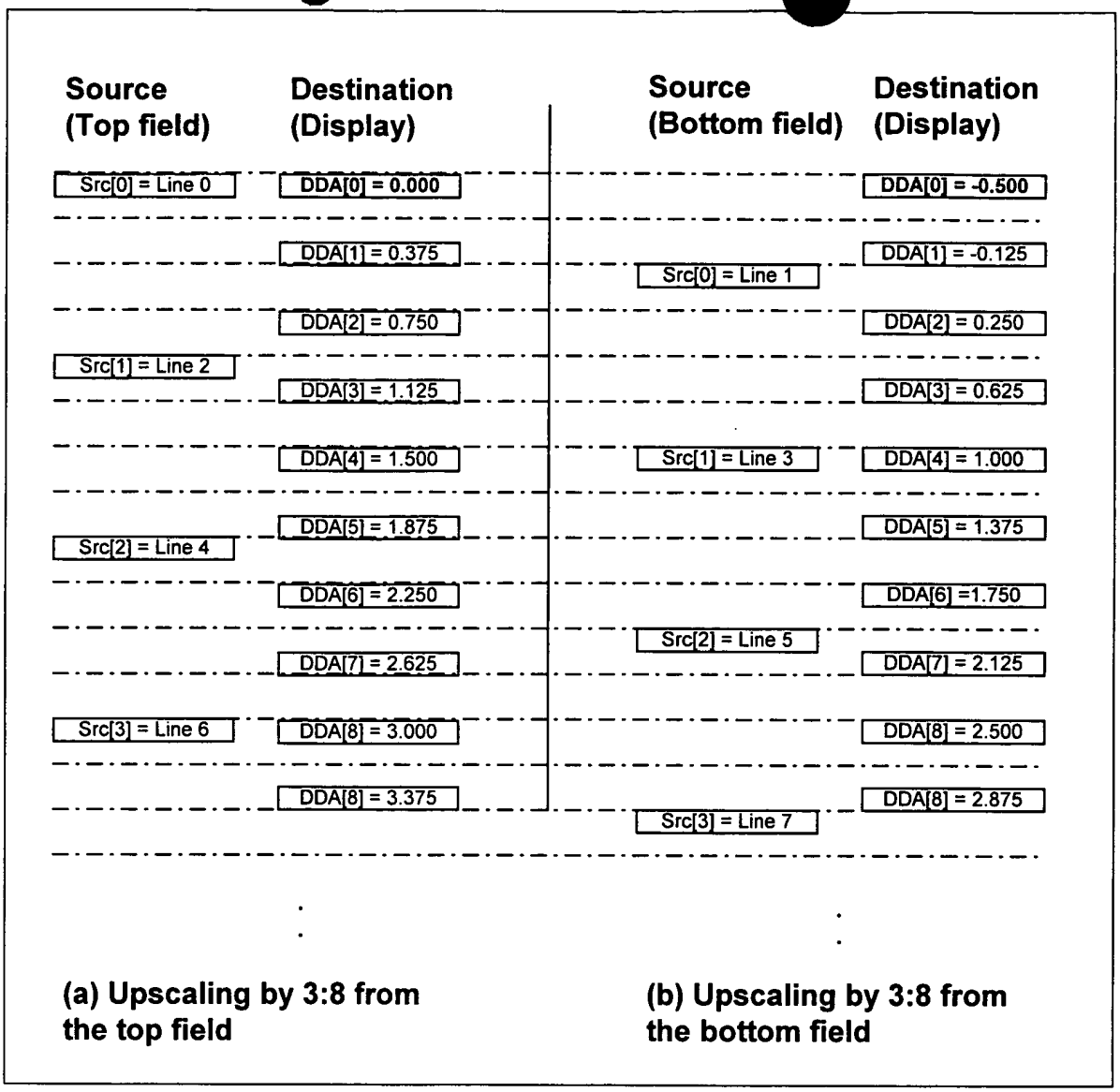
Source (Top field)
Destination (Display)
Source (Bottom field)
Destination (Display)
Src[0] = Line 0
DDA[0] = 0.000
DDA[0] = -0.500
DDA[1] = 0.375
Src[0] = Line 1
DDA[1] = -0.125
DDA[2] = 0.750
DDA[2] = 0.250
Src[1] = Line 2
DDA[3] = 1.125
DDA[3] = 0.625
DDA[4] = 1.500
Src[1] = Line 3
DDA[4] = 1.000
DDA[5] = 1.875
DDA[5] = 1.375
Src[2] = Line 4
DDA[6] = 2.250
DDA[6] =1.750
Src[2] = Line 5
DDA[7] = 2.625
DDA[7] = 2.125
Src[3] = Line 6
DDA[8] = 3.000
DDA[8] = 2.500
DDA[8] = 3.375
DDA[8] = 2.875
Src[3] = Line 7
(a) Upscaling by 3:8 from the top field
(b) Upscaling by 3:8 from the bottom field

Figure 15.

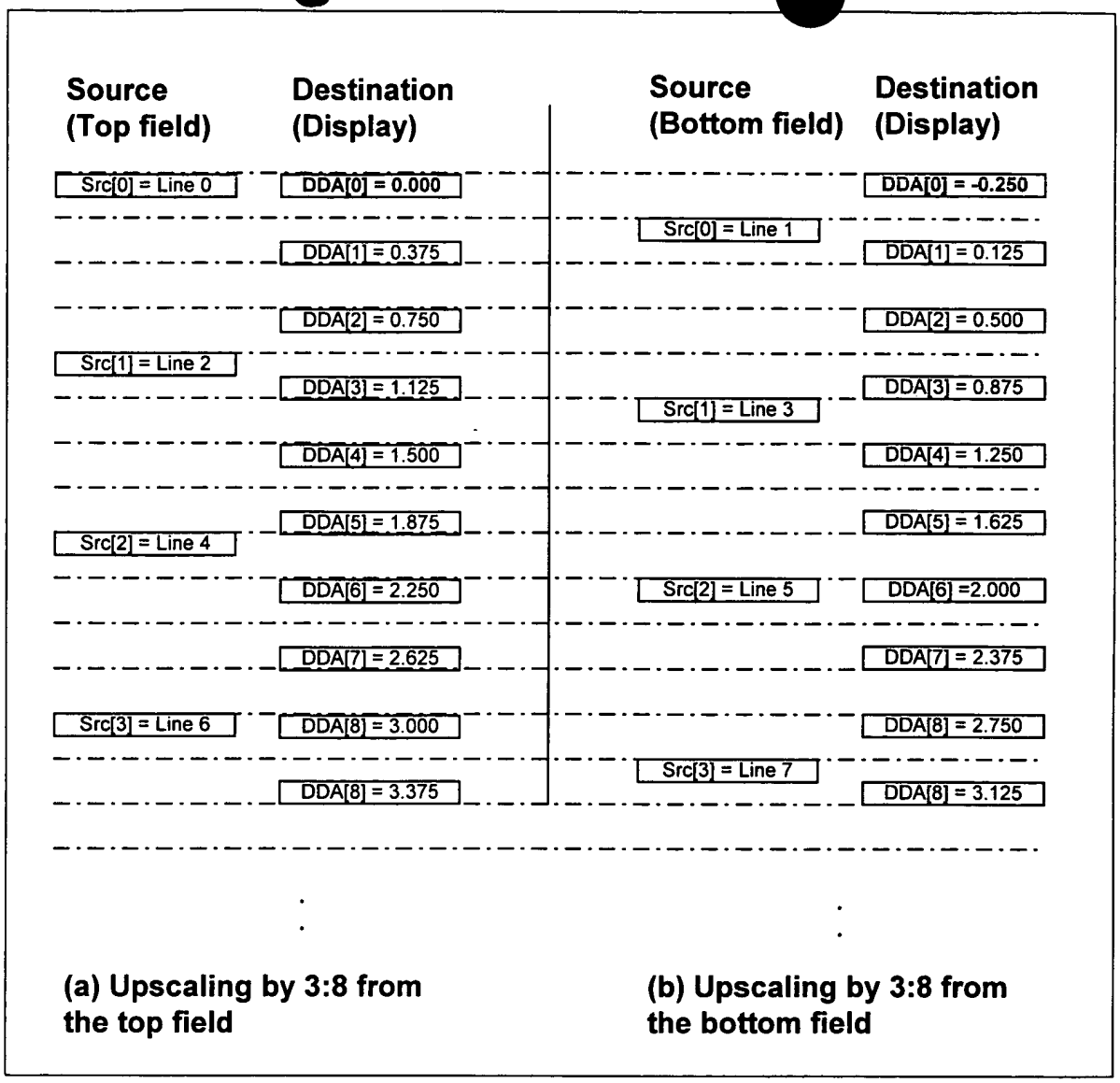
Source (Top field)
Destination (Display)
Source (Bottom field)
Destination (Display)
Src[0] = Line 0
DDA[0] = 0.000
DDA[1] = 0.375
DDA[2] = 0.750
Src[1] = Line 2
DDA[3] = 1.125
DDA[4] = 1.500
DDA[5] = 1.875
Src[2] = Line 4
DDA[6] = 2.250
DDA[7] = 2.625
Src[3] = Line 6
DDA[8] = 3.000
DDA[8] = 3.375
DDA[0] = -0.250
Src[0] = Line 1
DDA[1] = 0.125
DDA[2] = 0.500
DDA[3] = 0.875
Src[1] = Line 3
DDA[4] = 1.250
DDA[5] = 1.625
Src[2] = Line 5
DDA[6] =2.000
DDA[7] = 2.375
DDA[8] = 2.750
Src[3] = Line 7
DDA[8] = 3.125
(a) Upscaling by 3:8 from the top field
(b) Upscaling by 3:8 from the bottom field

Figure 16.